



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,301	01/30/2004	Carlo Bernard	DN2004032	6333
27280	7590	02/06/2006	EXAMINER	
THE GOODYEAR TIRE & RUBBER COMPANY INTELLECTUAL PROPERTY DEPARTMENT 823 1144 EAST MARKET STREET AKRON, OH 44316-0001			FISCHER, JUSTIN R	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/768,301	Applicant(s) BERNARD ET AL.	
	Examiner Justin R. Fischer	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-38 is/are pending in the application.
- 4a) Of the above claim(s) 21-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>012006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 21-35 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the previously drafted claims were directed to a pneumatic tire construction having a specific topping/coating rubber composition, while newly submitted claims 21-35 are directed to a method of curing a pneumatic tire having the above noted topping/coating rubber- in this instance, the tire is cured between 40 and 150 minutes at a temperature between 150 and 190 degrees Celsius. It is evident that the pneumatic tire construction can be produced by a materially different method, for example one in which the curing conditions do not satisfy those of the claimed invention (e.g. lower temperature and/or increased time).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 21-35 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonko (US 5,337,814, of record) and in view of Dunnom (US 3,738,948, of record), Lee (US 3,660,340, of record), Boon (US 4,356,219, newly cited), Toyoda (US 4,963,613, of record), and Watanabe (WO 01/14461, newly cited), and optionally in view of Bonko (US 6,062,282, of record). It is initially noted that the claims are in the form of a product-by-process claim- in such an instance, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself.

As best depicted in Figures 2 and 4, Bonko '814 discloses an agricultural tire having a plurality of lugs 18A, 18B, wherein said lugs have dimensions (length, width, and height) that satisfy the broad ranges of the claimed invention (Abstract, Column 4, Lines 38-40, Column 5, Lines 5-20, Column 6, Lines 45-51 and Lines 63+, and Column 9, Lines 30-40). The reference further teaches that the tire contains conventional tire components, include carcass plies and belt plies (Column 6, Lines 5-15). While the reference fails to expressly teach that these components are formed of textile reinforcing elements, it is extremely well known in the tire industry to use textile reinforcing elements in a wide variety of components (in a wide variety of tires), including the carcass and belt. Bonko '282 is optionally applied to expressly evidence the common use of textile reinforcing elements, such as polyester and nylon, in an agricultural tire construction (Column 6, Lines 4-10). As to the topping or coating rubber composition, Bonko '814 is completely silent as the specific makeup of said rubber. Dunnom, on the other hand, teaches a specific rubber composition for the manufacture

Art Unit: 1733

of a wide variety of fiber-reinforced composites, including carcass plies of vehicle tires (Column 4, Lines 10-15). In this instance, the composition of Dunnom is described as specifically providing improved adhesion between said rubber and polyester (Column 1, Lines 40-43). Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to use the composition of Dunnom in the polyester-reinforced carcass and/or belt of Bonko '814, it being noted that the composition of Dunnom is generic to improving adhesion between rubber and fiber reinforcing elements (e.g. polyester) in vehicle tires.

As to the composition, Dunnom suggests a composition that comprises (a) at least one of styrene-butadiene, polybutadiene, polyisoprene (synthetic or natural), (b) 0.5 to 2 phr of accelerator, preferably benzothiazoles, (c) 20-200 phr of a filler, such as carbon black and/or silica, and (d) 0.5 to 3 phr of sulfur (Column 1, Lines 50-60 and Column 3, Lines 10-50). Regarding (a), absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to form a composition that satisfied the broad ranges of the claimed invention. Thus, the composition of Dunnom is only devoid of the claimed resin. However, Dunnom clearly teaches that "other conventional rubber chemicals" can be employed (Column 3, Lines 30-40). In this instance, it is extremely well known in the tire industry to include tackifiers, such as aliphatic and/or aromatic hydrocarbons, in tire compositions in order to provide improved "tack" between adjacent rubber compositions, as shown for example by Lee (Column 1, Lines 35-50 and Column 2, Lines 9-45). It is emphasized that Lee specifically describes the use of such well known

Art Unit: 1733

tackifiers in tire compositions formed of synthetic rubbers that are analogous to those of Bonko '814, such as styrene butadiene rubber and/or polybutadiene rubber (Column 7, Lines 50-60). Lastly, the claimed amounts are consistent with the loadings commonly used for conventional rubber additives.

As to the inclusion of a polyepoxide emulsion and an RFL emulsion, it is extremely well known to treat synthetic fiber reinforcing elements, such as polyester, in order to improve adhesion between said reinforcing elements and the surrounding rubber. In particular, Boon discloses such a method in which a cord, particularly polyester, is initially treated with an aqueous emulsion comprising a polyepoxide (aqueous emulsion of epoxy) and subsequently treated with an RFL coating (Column 1, Lines 45-55 and Column 3, Lines 60+). In this instance, Boon teaches that such a method provides a high degree of adhesion between the polyester reinforcing element and the surrounding rubber. It is further noted that this benefit is consistent with the benefits of using the claimed topping/coating rubber, as detailed above. One of ordinary skill in the art at the time of the invention would have found it obvious to practice the "treatment" method of Boon in the tire of Bonko to achieve the above noted benefits.

In regards to the RFL coating, such a coating is extremely well known in a wide variety of industries. Boon suggests that it (RFL or resorcinol-formaldehyde latex) is commonly included as part of an aqueous latex, usually a butadiene/styrene/vinylpyridine terpolymer (Column 1, Lines 25-35). While the reference fails to expressly state that the rubber latex is formed as a combination of said

Art Unit: 1733

butadiene/styrene/vinylpyridine terpolymer and the claimed copolymer, it is extremely well known to form the rubber latex as a combination of these materials, as shown for example by Toyoda (Column 1, Lines 35-38). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to form the rubber latex in accordance to the limitations of the claimed invention.

With respect to the inclusion of a blocked isocyanate, said isocyanate represents an extremely well known and conventionally used additive in RFL coatings, as shown for example by Watanabe (Page 10, Lines 25-27). The reference expressly teaches that such an additive contributes to enhanced adhesive performance. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to include a blocked isocyanate in the RFL coating of Boon.

As to claims 36-38, it is not seen that the method steps involving the curing temperature and curing time result in a materially different product. Again, as noted above, the claims are directed to a product-by-process claim and patentability is based on the product itself.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

Art Unit: 1733

1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 36-38 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/609,165 in view of Bonko '814, Dunnom, and Lee. Claim 1 of US '165 generally teaches a pneumatic tire construction in which polyester cords (e.g. carcass and/or belt) are treated with an aqueous emulsion of polyepoxide and an aqueous RFL emulsion. While the claim fails to identify a specific type of tire, one of ordinary skill in the art at the time of the invention would have found it obvious to use such a treatment in all tire constructions in which adhesion is desired between polyester reinforcing elements and rubber. One example of such a tire is the agricultural tire of Bonko '814. In this instance, it would have been obvious to form the tire in US '165 in accordance to the dimensions/structure of Bonko '814. As to the specific topping/coating rubber, claim 1 of the application of Bonko '814 are completely silent to the specific makeup of said rubber. Dunnom, however, teaches the use of the claimed rubber composition for the manufacture of a wide variety of fiber-reinforced composites, including carcass plies of vehicle tires (Column 4, Lines 10-15). In this instance, the composition of Dunnom is described as specifically providing improved adhesion

between said rubber and polyester (Column 1, Lines 40-43) and it is well known to include a wide variety of conventional additives, such as tackifiers, as shown for example by Lee.

This is a provisional obviousness-type double patenting rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Grawey (US 4,211,592) suggests that large, earthmover tires typically have a curing temperature between 120 and 160 degrees Celsius for a time between 100 and 300 minutes (Column 2, Lines 62+). The reference further teaches that generally longer times are used with lower temperatures and shorter times are used for higher temperatures.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1733

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is (571) 272-1215. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Justin Fischer

February 1, 2006